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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/981,519	
	Filing Date	October 17, 2001	
	First Named Inventor	Abbondanzio et al.	
	Art Unit	2127	
	Examiner Name	Tang, Kenneth	
Total Number of Pages in This Submission	33	Attorney Docket Number	RP8920010145US1

ENCLOSURES (Check all that apply)		
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- 1 -

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	:	Before the Examiner:
Abbondanzio et al.	:	Tang, Kenneth
Serial No.: 09/981,519	:	Group Art Unit: 2127
Filed: October 17, 2001	:	
Title: AUTOMATICALLY SWITCHING	:	IBM Corporation
SHARED REMOTE DEVICES IN A	:	Intellectual Property Law
DENSE SERVER ENVIRONMENT	:	3039 Cornwallis Road
THEREBY ALLOWING THE REMOTE	:	Research Triangle Park, NC 27709
DEVICES TO FUNCTION AS A LOCAL	:	
DEVICE	:	

APPEAL BRIEF

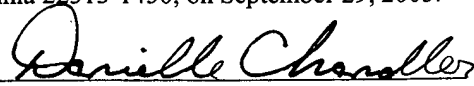
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Commissioner for Patents
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Alexandria, VA 22313-1450

I. REAL PARTY IN INTEREST

The real party in interest is International Business Machines, Inc., which is the assignee of the entire right, title and interest in the above-identified patent application.

CERTIFICATION UNDER 37 C.F.R. §1.8

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Signature

Danielle Chandler
(Printed name of person certifying)

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants, Appellants' legal representative or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-22 are pending in the Application. Claims 1-22 stand rejected. Claims 1-22 are appealed.

IV. STATUS OF AMENDMENTS

Appellants have not submitted any amendments following receipt of the final rejection with a mailing date of June 16, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

In one embodiment of the present invention, a method for automatically switching remote shared devices in a dense server environment may comprise the step of receiving a request to access a shared device from a server blade. Specification, page 10, line 3 – page 11, line 5; Figure 3, step 301. The method may further comprise issuing a query as to whether the shared device is being accessed. Specification, page 11, lines 6-8; Figure 3, step 302. The method may further comprise receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Specification, page 12, lines 3-8; Figure 3, step 307. The method may further comprise waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Specification, page 12, lines 8-18; Figure 3, step 308.

In another embodiment of the present invention, a computer program product embodied in a machine readable medium for automatically switching remote shared devices in a dense server environment may comprise the programming step of

receiving a request to access a shared device from a server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 10, line 3 – page 11, line 5; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 301. The computer program product may further comprise the programming step of issuing a query as to whether the shared device is being accessed. Specification, page 8, line 4 – page 9, line 26; Specification, page 11, lines 6-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 302. The computer program product may further comprise the programming step of receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 3-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 307. The computer program product may further comprise the programming step of waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 8-18; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 308.

In another embodiment of the present invention, a system comprising one or more shared devices. Specification, page 7, line 3 – page 8, line 2; Figure 1, element 130. The system may further comprise a plurality of server blades coupled to the one or more shared devices via a service unit, where the service unit is configured to establish a connection between one of the one or more shared devices and one of the plurality of server blades requesting to access the one of the one or more shared devices. Specification, page 7, line 3 – page 8, line 2; Figure 1, elements 110, 120, 130. The requesting server blade may further comprise a processor. Specification, page 8, line 4 – page 9, line 26; Figure 2, element 201. The requesting server blade may further comprise a memory unit coupled to the processor, where the memory unit is operable for storing a program, where the program is operable for performing the programming step of receiving a request to access the requested shared device from the requesting server blade. Specification, page 8, line 4 – page 9, line 26;

Specification, page 10, line 3 – page 11, line 5; Figure 1, element 110; Figure 2, elements 201, 204, 206; Figure 3, step 301. The program may further be operable for performing the programming step of issuing a query as to whether the shared device is being accessed. Specification, page 8, line 4 – page 9, line 26; Specification, page 11, lines 6-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 302. The program may further be operable for performing the programming step of receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 3-8; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 307. The program may further be operable for performing the programming step of waiting to receive a response that the shared device is available if the shared device is not being accessed by the server blade. Specification, page 8, line 4 – page 9, line 26; Specification, page 12, lines 8-18; Figure 1, element 110; Figure 2, elements 204, 206; Figure 3, step 308.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-22 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Appellants regard as the invention. Claims 1-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Bottom (U.S. Patent Application Publication No. 2002/0194412) in view of DeForest et al. (U.S. Patent No. 6,446,129) (hereinafter "DeForest").

VII. ARGUMENT

A. Claims 1-22 are improperly rejected under 35 U.S.C. §112, second paragraph.

The Examiner has rejected claims 1-22 under 35 U.S.C. §112, second paragraph, for allegedly being indefinite for failing to particularly point out and distinctly claims the subject matter which Appellants regard as the invention. Paper

No. 5, page 2. In particular, the Examiner states that the term "switching" in the preamble of claims 1 and 8 is indefinite "because there is no relationship made with anything else in the claim". Paper No. 5, page 2. Appellants respectfully traverse the assertion that Appellants failed to particularly point out and distinctly claim the subject matter which Appellants regard as the invention.

Appellants respectfully traverse the assertion that since the term "switching", as recited in the preamble of claims 1 and 8, is not referred to in the body of claims 1 and 8 that claims 1 and 8 are indefinite. This is not an appropriate reason for rejecting claims as being indefinite under 35 U.S.C. §112, second paragraph. A rejection under 35 U.S.C. §112, second paragraph, is not appropriate, when the scope of the claimed subject matter can be determined by one having ordinary skill in the art. M.P.E.P. §706.03(d). Claims 1-14 clearly set forth the metes and bounds of the patent protection desired in relation to automatically switching remote shared devices to particular server blades in a dense server environment as discussed on pages 7-13 of the Specification. The Examiner has not provided any evidence that a person of ordinary skill in the art would not be able to determine the scope of the claimed subject matter in claims 1 and 8. One having ordinary skill in the art can determine the scope of the claimed subject matter in claims 1-14. Consequently, Appellants respectfully assert that claims 1-14 are allowable under 35 U.S.C. §112, second paragraph, and respectfully request the Examiner to withdraw the rejections of claims 1-14 under 35 U.S.C. §112, second paragraph.

In response to the above argument, the Examiner asserts that claims 1 and 8 are rejected under 35 U.S.C. §112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. Paper No. 5, page 7. Appellants respectfully traverse. Appellants respectfully assert that claims 1 and 8 do not omit matter disclosed to be essential to the invention as described in the Specification. Accordingly, claims 1-14 are allowable under 35 U.S.C. §112, second paragraph.

Furthermore, the Examiner has not specifically pointed out the essential elements deemed to have been omitted from claims 1 and 8. The Examiner must specify the matter disclosed to be essential to the invention in the Specification that was not claimed in claims 1 and 8. *See In re Mayhew*, 527 F.2d 1229, 188 U.S.P.Q. 356 (C.C.P.A. 1976); M.P.E.P. §2172.01. Again, Appellants respectfully assert that claims 1 and 8 do not omit matter disclosed to be essential to the invention as described in the Specification. Accordingly, claims 1-14 are allowable under 35 U.S.C. §112, second paragraph

Furthermore, a rejection for omitting essential structural cooperative relationships of elements is not appropriate under 35 U.S.C. §112, second paragraph. M.P.E.P. §2172.01. Instead, such a rejection is appropriate under 35 U.S.C. §112, first paragraph. M.P.E.P. §2172.01. Accordingly, claims 1-14 are allowable under 35 U.S.C. §112, second paragraph.

Furthermore, the Examiner rejects claim 15 under 35 U.S.C. §112, second paragraph, because "it is not made explicitly clear in the claim language whether this is a system or a method claim." Paper No. 5, page 2. Appellants respectfully traverse. The preamble of claim 15 recites "a system." Claim 15 further includes structural elements such as shared devices, server blades, a processor, a memory unit, etc. It is quite clear that claim 15 is a system claim and not a method claim. Further, the fact that some of the limitations are steps performed by a program does not render the claim a method claim. Neither the fact that some of the limitations are steps performed by a program does not render the claim indefinite. As stated above, a rejection under 35 U.S.C. §112, second paragraph, is not appropriate, when the scope of the claimed subject matter can be determined by one having ordinary skill in the art. M.P.E.P. §706.03(d). Claims 15-22 clearly set forth the metes and bounds of the patent protection desired in relation to automatically switching remote shared devices to particular server blades in a dense server environment as discussed on pages 7-13 of the Specification. The Examiner has not provided any evidence that a person of

ordinary skill in the art would not be able to determine the scope of the claimed subject matter in claim 15. One having ordinary skill in the art can determine the scope of the claimed subject matter in claims 15-22. Consequently, Appellants respectfully assert that claims 15-22 are allowable under 35 U.S.C. §112, second paragraph, and respectfully request the Examiner to withdraw the rejections of claims 15-22 under 35 U.S.C. §112, second paragraph.

B. Claims 1-22 are not properly rejected under 35 U.S.C. §103(a) as being unpatentable over Bottom in view of DeForest.

The Examiner has rejected claims 1-22 under 35 U.S.C. § 103(a) as being unpatentable over Bottom in view of DeForest. Paper No. 5, page 3. Appellants respectfully traverse these rejections for at least the reasons stated below.

1. The Examiner has not provided any appropriate motivation for combining Bottom and DeForest.

The Examiner admits that Bottom does not teach (1) to receive a request to access a shared device from a server blade; (2) to issue a query as to whether the shared device is being accessed; and (3) wherein if the shared device is not being accessed by the server blade then to receive a response to the query indicating that the shared device is not available and to wait to receive a response that the shared device is available. Paper No. 5, page 3. The Examiner's motivation for modifying Bottom with DeForest to include such limitations is to "improve the managing of the shared resource, which will in turn, decrease cost and complexity, etc. (col. 2, lines 11-36)." Paper No. 5, page 4.

In order to establish a *prima facie* case of obviousness, the Examiner must provide some suggestion or motivation, either in the references themselves, the knowledge of one of ordinary skill in the art, or, in some cases the nature of the problem to be solved, to modify the reference or to combine reference teachings. *See In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). The

Examiner asserts that the motivation to combine Bottom and DeForest comes from the teachings of DeForest, in particular, column 2, lines 11-36 of DeForest. Paper No. 5, page 4. The Examiner's motivation (column 2, lines 11-36 of DeForest) is insufficient to support a *prima facie* case of obviousness for at least the reasons stated below.

The Examiner's motivation is not a motivation as to why one of ordinary skill in the art would have been motivated to modify Bottom with the teachings of DeForest. The passage cited by the Examiner for support for his motivation simply states the problems that DeForest attempts to overcome. Bottom teaches that with today's skyrocketing real estate costs, it is an important consideration for data centers to efficiently use the floor space available for the server systems. [0009]. Bottom further teaches that server systems are generally very cumbersome and time consuming to deploy and repair, and the costs associated with the time it takes to deploy or repair a server also makes a significant impact on the bottom line for a data center operator. [0009]. Bottom further teaches that there is a need for a compact, high-density, rapidly-deployable, high-availability server system having simplified management and serviceability and unlimited scalability. [0010]. Bottom further teaches that the server system would provide higher revenues for data center operators, top-of-the-line performance and cost savings. [0010]. DeForest, on the other hand, teaches that the requirement of maintaining, recognizing and responding to a different set of function values for each operating environment or resource protocol for each shared resource managed by a shared resource unit will result in such problems as increased cost and complexity and increased processing time with a resulting decrease in operating speed. Column 2, lines 11-17 (Examiner's source of motivation). Hence, the Examiner's motivation (column 2, lines 11-17 of DeForest) relates to synchronizing function values in a shared resource unit providing shared resources to a plurality of resource users submitting requests in a plurality of protocols. This is not related to developing a simplified management and serviceability and unlimited scalability in order to provide higher revenues and cost

savings for data center operators, as taught in Bottom. The Examiner's motivation is not a suggestion to modify Bottom (1) to receive a request to access a shared device from a server blade; (2) to issue a query as to whether the shared device is being accessed; and (3) wherein if the shared device is not being accessed by the server blade then to receive a response to the query indicating that the shared device is not available and to wait to receive a response that the shared device is available. The Examiner has not provided any evidence of there being a connection between incorporating these limitations in Bottom and column 2, lines 11-36 of DeForest which simply states the problems that DeForest attempts to overcome.

The Examiner must provide objective evidence as to why one of ordinary skill in the art would modify Bottom, which teaches a need for a compact, high-density, rapidly-deployable, high-availability server system having simplified management and serviceability and unlimited scalability ([0010]), with the teachings of DeForest to include the above-cited claim limitations. *See In re Lee*, 61 U.S.P.Q.2d 1430, 1433-34 (Fed. Cir. 2002); *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000). Merely citing to a passage in DeForest (column 2, lines 11-36) which does not provide any motivation for modifying Bottom (1) to receive a request to access a shared device from a server blade; (2) to issue a query as to whether the shared device is being accessed; and (3) wherein if the shared device is not being accessed by the server blade then to receive a response to the query indicating that the shared device is not available and to wait to receive a response that the shared device is available is insufficient to support a *prima facie* case of obviousness for rejecting claims 1-22. Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 1-22. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

In response to the above argument, the Examiner states that "the motivation to do the combination is that it improves the managing of the shared resource, which will in turn, decrease cost and complexity, etc. (col. 2, lines 11-36)." Paper No. 5,

page 8. Appellants acknowledge that DeForest's attempts to overcome the problem of cost and complexity which results from the requirement of maintaining, recognizing and responding to a different set of function values for each operating environment or resource protocol for each shared resource managed by a shared resource unit (see column 2, lines 11-16). However, how does overcoming the problem of cost and complexity which results from the requirement of maintaining, recognizing and responding to a different set of function values for each operating environment or resource protocol for each shared resource managed by a shared resource unit relate to modifying Bottom (1) to receive a request to access a shared device from a server blade; (2) to issue a query as to whether the shared device is being accessed; and (3) wherein if the shared device is not being accessed by the server blade then to receive a response to the query indicating that the shared device is not available and to wait to receive a response that the shared device? There is no connection. The Examiner is merely citing to a passage in DeForest, which discusses a problem that DeForest overcomes, which contains no language for a motivation to modify Bottom to include the above-cited claim limitations. Consequently, the Examiner's motivation is insufficient to support a *prima facie* case of obviousness for rejecting claims 1-22. *In re Lee*, 61 U.S.P.Q.2d 1430, 1434 (Fed. Cir. 2002).

2. Bottom and DeForest, taken singly or in combination, do not teach or suggest the following claim limitations.

a. Claims 1, 8 and 15 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "a method for automatically switching remote shared devices in a dense server environment" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites "hot swap" as teaching switching and paragraphs 20, 25-26 and 29 of Bottom as teaching the above-cited language. Paper No. 5, page 3. Appellants respectfully traverse and assert that Bottom instead teaches

that hot swap refers to replacing a server blade in the modular server system without powering down the entire system. [0025]. There is no language in the cited passages that teaches automatically switching remote shared devices but instead the cited passages teach replacing a server blade without powering down the entire system. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "receiving a request to access a shared device from a server blade" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites column 6, lines 35-55 of DeForest and paragraphs 26 and 29 of Bottom in combination as teaching the above-cited claim limitation. Paper No. 5, page 4. Appellants respectfully traverse and assert that Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane. [0026]. Bottom further teaches that the server blade includes interrupt controllers. [0029]. DeForest instead teaches that the client systems may generate requests with one or more of a plurality of different protocols. There is no language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches receiving a request to access a shared device from a server blade. DeForest instead teaches a client system (not a server blade) generating a request to a shared resource. Neither is there any language in the cited passages in DeForest that specifies as to what type of request, e.g., whether the request is a request to access a shared device. In the cited passages of Bottom, there is no language that teaches receiving a request to access a shared device from a server blade. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect,

factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "issuing a query as to whether said shared device is being accessed" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites column 6, lines 35-55 of DeForest and paragraphs 26 and 29 of Bottom in combination as teaching the above-cited claim limitation. Paper No. 5, pages 3-4. Appellants respectfully traverse and assert that Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane. [0026]. Bottom further teaches that the server blade includes interrupt controllers. [0029]. DeForest instead teaches that the client systems may generate requests with one or more of a plurality of different protocols. There is no language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches issuing a query as to whether a shared device is being accessed. DeForest instead teaches a client system generating a request to a shared resource. In the cited passages of Bottom, there is no language that teaches issuing a query as to whether a shared device is being accessed. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to the above argument, the Examiner now cites paragraph 29 of Bottom and column 6, lines 20-27 and 35-55 of DeForest as teaching the above-cited claim limitation. Paper No. 5, page 10. Appellants respectfully traverse. Bottom instead teaches that the server blade 500 preferably includes interrupt controllers 526, which provide support for level-triggered and edge-triggered inputs, individual input masking and fixed and rotating priorities. [0029]. Bottom further teaches that a push-button reset/abort button 503 may also be provided to allow a user to reset the server blade 500. [0029]. There is no language in the cited passage of Bottom that

teaches issuing a query as to whether the shared device is being accessed.

Furthermore, DeForest instead teaches a diagrammatic representation of a Function Value Synchronization Mechanism 30 implemented, for example, in one or more both of blade processors 24 of a pair of blade processors 24A and 24B for performing the functions and operations to maintain and provide a shared resource, such as shared data or program files or storage space in a file server. Column 6, lines 19-26. There is no language in the cited passage of DeForest that teaches issuing a query as to whether the shared device is being accessed.

Furthermore, DeForest instead teaches a shared resource unit 12 will receive requests 32 from a plurality of sources 34, each of which may be, for example, a client system 10, and each source 34 may generate requests 32 using one or more of a plurality of different protocols. Column 6, lines 45-50. There is no language in the cited passage of DeForest that teaches issuing a query as to whether the shared device is being accessed.

Furthermore, there is no language in the combination of Bottom and DeForest that teaches issuing a query as to whether the shared device is being accessed.

Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of: receiving a response to said query indicating that said shared device is not available" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites column 6, lines 35-55 of DeForest and paragraph 26 of Bottom in combination as teaching the

above-cited claim limitation. Paper No. 5, pages 3-4. Appellants respectfully traverse and assert that Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane. [0026]. DeForest instead teaches that the client systems may generate requests with one or more of a plurality of different protocols. As stated above, there is no language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches issuing a query as to whether a shared device is being accessed. Neither is there any language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches determining that the shared device is not being accessed by a server blade. Neither is there any language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches receiving a response to the query indicating that the shared device is not available. DeForest instead teaches a client system generating a request to a shared resource. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to the above argument, the Examiner additionally cites column 6, lines 20-27 of DeForest as teaching the above-cited claim limitation. Paper No. 5, page 10. Appellants respectfully traverse and assert that DeForest instead teaches a diagrammatic representation of a Function Value Synchronization Mechanism 30 implemented, for example, in one or more both of blade processors 24 of a pair of blade processors 24A and 24B for performing the functions and operations to maintain and provide a shared resource, such as shared data or program files or storage space in a file server. Column 6, lines 19-26. There is no language in the cited passage of DeForest that teaches receiving a response to the query indicating that the shared device is not available if the shared device is not being accessed by the server blade. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d

1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of: waiting to receive a response that said shared device is available" as recited in claim 1 and similarly in claims 8 and 15. The Examiner cites column 6, lines 35-55 of DeForest and paragraph 26 of Bottom in combination as teaching the above-cited claim limitation. Paper No. 5, pages 3-4. Appellants respectfully traverse and assert that Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane to monitor the midplane and the modules, to monitor on-board operating voltages and temperatures and to "trip" an alarm if thresholds are exceeded. [0026]. DeForest instead teaches that the client systems may generate requests with one or more of a plurality of different protocols. As stated above, there is no language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches issuing a query as to whether a shared device is being accessed. Neither is there any language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches determining that the shared device is not being accessed by a server blade. Neither is there any language in either Bottom or in DeForest or in the combination of Bottom and DeForest that teaches waiting to receive a response that the shared device is available if the shared device is not being accessed by a server blade. Bottom instead teaches that triggering an alarm if thresholds are exceeded. There is no waiting being accomplished as asserted by the Examiner. Neither is there any language in the cited passage in Bottom that teaches waiting to receive a response that a shared device is available. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 1, 8 and 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "one or more shared devices; and a plurality of server blades coupled to said one or more shared devices via a service unit, wherein said service unit is configured to establish a connection between one of said one or more shared devices and one of said plurality of server blades requesting to access said one of said one or more shared devices" as recited in claim 15. The Examiner cites paragraphs 29 and 31-33 of Bottom as teaching the above-cited claim limitations. Paper No. 5, page 6. Further, the Examiner cites media blade 150 of Bottom as teaching a service unit as recited in the above-cited claim limitation. Paper No. 3, page 6. Appellants respectfully traverse and assert that Bottom instead teaches that the server blade includes a USB connector. [0029]. While the server blades as taught in Bottom include a USB connector, there is no language in Bottom that teaches that the server blade is connected to a shared device via a media blade (Examiner asserts that element 150, a media blade, of Bottom teaches a service unit). Appellants have searched through Figures 1, 5 and 6 of Bottom and were unable to identify a shared device connected to a server blade via a media blade. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claim 15, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- b. Claims 2-7 are patentable over Bottom in view of DeForest for at least the reasons that claim 1 is patentable over Bottom in view of DeForest.

Claims 2-7 depend from claim 1 and hence are patentable over Bottom in view of DeForest for at least the reasons that claim 1 is patentable over Bottom in view of DeForest, as discussed above in Section B.2.a.

- c. Claims 9-14 are patentable over Bottom in view of DeForest for at least the reasons that claim 8 is patentable over Bottom in view of DeForest.

Claims 9-14 depend from claim 8 and hence are patentable over Bottom in view of DeForest for at least the reasons that claim 8 is patentable over Bottom in view of DeForest, as discussed above in Section B.2.a.

- d. Claims 16-22 are patentable over Bottom in view of DeForest for at least the reasons that claim 15 is patentable over Bottom in view of DeForest.

Claims 16-22 depend from claim 15 and hence are patentable over Bottom in view of DeForest for at least the reasons that claim 15 is patentable over Bottom in view of DeForest, as discussed above in Section B.2.a.

- e. Claims 2, 9 and 16 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "determining if said shared device is being accessed" as recited in claim 2 and similarly in claims 9 and 16. The Examiner cites paragraphs 20 and 25 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 4. Appellants respectfully traverse and assert that Bottom instead teaches that four switch blades where one can be assigned to an Ethernet channel for system management traffic and another assigned to a channel for Web traffic while the remaining two switch blades may be placed in standby mode for hardware and/or software fail-over capability. [0020]. Bottom further teaches the "hot swap" functionality in a multi-server environment that allows a server blade to be replaced without powering down the entire system. [0025]. There is no language in the cited passages in Bottom that teaches determining if a shared device is being accessed. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 2, 9 and 16, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

f. Claims 3, 10 and 17 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "wherein if said shared device is not being accessed then the method further comprises the steps of: connecting said shared device with said server blade" as recited in claim 3 and similarly in claims 10 and 17. The Examiner cites paragraphs 31-33 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 4. Appellants respectfully traverse and assert that Bottom teaches a media blade having a connection with a server blade via a midplane. [0031]. However, there is no language that the connection between the server blade and the media blade occurs if that media blade is not being accessed. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 3, 10 and 17, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "transferring said request to access said shared device to said shared device", as recited in claim 3 and similarly in claims 10 and 17. The Examiner cites paragraphs 20 and 25 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 4. Appellants respectfully traverse and assert that Bottom instead teaches that four switch blades where one can be assigned to an Ethernet channel for system management traffic and another assigned to a channel for Web traffic while the remaining two switch blades may be placed in standby mode for hardware and/or software fail-over capability. [0020]. Bottom further teaches the "hot swap" functionality in a multi-server environment that allows a server blade to be replaced without powering down the entire system. [0025]. There is no language in the cited passages in Bottom that teaches transferring a request to access a shared device to the shared device. Therefore, the Examiner has not presented a *prima facie*

case of obviousness in rejecting claims 3, 10 and 17, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- g. Claims 4, 11 and 18 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "determining if said shared device is being accessed by said server blade" as recited in claim 4. The Examiner cites paragraph 26 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 4. Appellants respectfully traverse. As stated above, Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane to monitor the midplane and the modules, to monitor on-board operating voltages and temperatures and to "trip" an alarm if thresholds are exceeded. [0026]. There is no language in the cited passage in Bottom that teaches determining if a shared device is being accessed by a server blade. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 4, 11 and 18, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to the above argument, the Examiner further cites paragraphs 20 and 25 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 12. Appellants respectfully traverse. Bottom instead teaches that four switch blades where one can be assigned to an Ethernet channel for system management traffic and another assigned to a channel for Web traffic while the remaining two switch blades may be placed in standby mode for hardware and/or software fail-over capability. [0020]. Bottom further teaches the "hot swap" functionality in a multi-server environment that allows a server blade to be replaced without powering down the entire

system. [0025]. There is no language in the cited passage in Bottom that teaches determining if a shared device is being accessed by a server blade. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 4, 11 and 18, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

h. Claims 5, 12 and 19 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "wherein if said shared device is being accessed by said server blade then the method further comprises the steps of: connecting said shared device with said server blade" as recited in claim 5. The Examiner cites paragraphs 31-33 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 5. Appellants respectfully traverse and assert that Bottom teaches a media blade having a connection with a server blade via a midplane. [0031]. However, there is no language that the connection between the server blade and the media blade occurs if that media blade is being accessed by that server blade. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 5, 12 and 19, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "transferring said request to access said shared device to said shared device" as recited in claim 5 and similarly in claims 12 and 19. The Examiner cites paragraphs 20 and 25 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 5. Appellants respectfully traverse and assert that Bottom instead teaches that four switch blades where one can be assigned to an Ethernet channel for system management traffic and another assigned to a channel for Web traffic while the remaining two switch blades may be placed in standby mode for

hardware and/or software fail-over capability. [0020]. Bottom further teaches the "hot swap" functionality in a multi-server environment that allows a server blade to be replaced without powering down the entire system. [0025]. There is no language in the cited passages in Bottom that teaches transferring a request to access a shared device to the shared device. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 5, 12 and 19, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

- i. Claims 6, 13 and 20 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "receiving said response that said shared device is available" as recited in claim 6 and similarly in claims 13 and 20. The Examiner cites paragraph 26 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 5. Appellants respectfully traverse. As stated above, Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane to monitor the midplane and the modules, to monitor on-board operating voltages and temperatures and to "trip" an alarm if thresholds are exceeded. [0026]. There is no language in the cited passage in Bottom that teaches receiving a response that a shared device is available. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 13 and 20, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

Appellants further assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "transferring said request to access said shared device to said shared device" as recited in claim 6 and similarly in claims 13 and 20.

The Examiner cites paragraphs 20 and 25 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 5. Appellants respectfully traverse. As stated above, Bottom instead teaches that four switch blades where one can be assigned to an Ethernet channel for system management traffic and another assigned to a channel for Web traffic while the remaining two switch blades may be placed in standby mode for hardware and/or software fail-over capability. [0020]. Bottom further teaches the "hot swap" functionality in a multi-server environment that allows a server blade to be replaced without powering down the entire system. [0025]. There is no language in the cited passages in Bottom that teaches transferring a request to access a shared device to the shared device. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 6, 13 and 20, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

j. Claims 7, 14 and 21 are patentable over Bottom in view of DeForest.

Appellants respectfully assert that Bottom and DeForest, taken singly or in combination, do not teach or suggest "wherein said shared device is a Universal Serial Bus device" as recited in claim 7 and similarly in claims 14 and 21. The Examiner cites paragraph 29 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 5. Appellants respectfully traverse and assert that Bottom instead teaches that the server blade includes a USB connector. While the server blades include a USB connector, there is no language in the cited passage that teaches that the server blade is connected to a shared device that is a USB device. The Examiner had previously cited element 150 (media blade) of Bottom as teaching a shared device. There is no language in the cited passage of Bottom that teaches that the media blade of Bottom is a USB device. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 7, 14 and 21, since the Examiner

is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

In response to the above argument, the Examiner further cites paragraph 26 of Bottom as teaching the above-cited claim limitation. Paper No. 5, page 10. Appellants respectfully traverse. Bottom instead teaches a server blade that includes a CPU and a server system management bus that allows the server blade to communicate with the midplane to monitor the midplane and the modules, to monitor on-board operating voltages and temperatures and to "trip" an alarm if thresholds are exceeded. [0026]. There is no language in the cited passage that teaches that the server blade is connected to a shared device that is a USB device. Therefore, the Examiner has not presented a *prima facie* case of obviousness in rejecting claims 7, 14 and 21, since the Examiner is relying upon an incorrect, factual predicate in support of the rejection. *In re Rouffet*, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

VIII. CONCLUSION

For the reasons noted above, the rejections of claims 1-22 are in error. Appellants respectfully request reversal of the rejections and allowance of claims 1-22.

Respectfully submitted,

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**CLAIMS APPENDIX**

A method for automatically switching remote shared devices in a dense server environment comprising the steps of:

receiving a request to access a shared device from a server blade; and

issuing a query as to whether said shared device is being accessed;

wherein if said shared device is not being accessed by said server blade then the method further comprises the steps of:

receiving a response to said query indicating that said shared device is not available; and

waiting to receive a response that said shared device is available.

2. The method as recited in claim 1 further comprising the step of:
determining if said shared device is being accessed.
3. The method as recited in claim 2, wherein if said shared device is not being accessed then the method further comprises the steps of:
connecting said shared device with said server blade; and
transferring said request to access said shared device to said shared device.
4. The method as recited in claim 2, wherein if said shared device is being accessed then the method further comprises the step of:
determining if said shared device is being accessed by said server blade.
5. The method as recited in claim 4, wherein if said shared device is being accessed by said server blade then the method further comprises the steps of:
connecting said shared device with said server blade; and
transferring said request to access said shared device to said shared device.
6. The method as recited in claim 1 further comprising the steps of:

receiving said response that said shared device is available;
connecting said shared device with said server blade; and
transferring said request to access said shared device to said shared device.

7. The method as recited in claim 1, wherein said shared device is a Universal Serial Bus device.

8. A computer program product embodied in a machine readable medium for automatically switching remote shared devices in a dense server environment comprising the programming steps of:

receiving a request to access a shared device from a server blade; and
issuing a query as to whether said shared device is being accessed;

wherein if said shared device is not being accessed by said server blade then the computer program product further comprises the programming steps of:

receiving a response to said query indicating that said shared device is not available; and

waiting to receive a response that said shared device is available.

9. The computer program product as recited in claim 8 further comprises the programming step of:

determining if said shared device is being accessed.

10. The method as recited in claim 9, wherein if said shared device is not being accessed then the computer program product further comprises the programming steps of:

connecting said shared device with said server blade; and
transferring said request to access said shared device to said shared device.

11. The computer program product as recited in claim 9, wherein if said shared

device is being accessed then the computer program product further comprises the programming step of:

determining if said shared device is being accessed by said server blade.

12. The computer program product as recited in claim 9, wherein if said shared device is being accessed by said server blade then the computer program product further comprises the programming steps of:

connecting said shared device with said server blade; and

transferring said request to access said shared device to said shared device.

13. The computer program product as recited in claim 8 further comprises the programming steps of:

receiving said response that said shared device is available;

connecting said shared device with said server blade; and

transferring said request to access said shared device to said shared device.

14. The computer program product as recited in claim 8, wherein said shared device is a Universal Serial Bus device.

15. A system, comprising:

one or more shared devices; and

a plurality of server blades coupled to said one or more shared devices via a service unit, wherein said service unit is configured to establish a connection between one of said one or more shared devices and one of said plurality of server blades requesting to access said one of said one or more shared devices;

wherein said requesting server blade comprises:

a processor; and

a memory unit coupled to said processor, wherein said memory unit is operable for storing a program, wherein the program is operable for performing the

following programming steps:

receiving a request to access said requested shared device from said requesting server blade; and

issuing a query to said service unit as to whether said requested shared device is being accessed;

wherein if said requested shared device is not being accessed by said requesting server blade then the program is further operable for performing the following programming steps:

receiving a response to said query indicating that said requested shared device is not available; and

waiting to receive a response that said requested shared device is available.

16. The system as recited in claim 15, wherein said service unit comprises:

a processor; and

a memory unit coupled to said processor, wherein said memory unit is operable for storing a computer program, wherein the computer program is operable for performing the following programming step:

determining if said requested shared device is being accessed.

17. The system as recited in claim 16, wherein if said requested shared device is not being accessed then the computer program of said service unit is further operable for performing the following programming step:

connecting said requested shared device with said requesting server blade;

wherein if said requested shared device is not being accessed then the program of said requesting server blade is further operable for performing the following programming step:

transferring said request to access said requested shared device to said requested shared device.

18. The system as recited in claim 16, wherein if said requested shared device is being accessed then the computer program of said service unit is further operable for performing the following programming step:

determining if said requested shared device is being accessed by said requesting server blade.

19. The system as recited in claim 18, wherein if said requested shared device is being accessed by said requesting server blade then the computer program of said service unit is further operable for performing the following programming step:

connecting said requested shared device with said requesting server blade;

wherein if said requested shared device is being accessed by said requesting server blade then the program of said requesting server blade is further operable for performing the following programming step:

transferring said request to access said requested shared device to said requested shared device.

20. The system as recited in claim 15, wherein the program of said requesting server blade is further operable for performing the following programming step:

receiving said response that said requested shared devices is available.

21. The system as recited in claim 20, wherein the computer program of said service unit is further operable for performing the following programming step:

connecting said requested shared device with said requesting server blade;

wherein the program of said requesting server blade is further operable for performing the following programming step:

transferring said request to access said requested shared device to said requested shard device.

22. The system as recited in claim 15, wherein said requested shared device is a Universal Serial Bus device.

EVIDENCE APPENDIX

No evidence was submitted pursuant to §§1.130, 1.131, or 1.132 of 37 C.F.R. or of any other evidence entered by the Examiner and relied upon by Appellants in the Appeal.

RELATED PROCEEDINGS APPENDIX

There are no related proceedings to the current proceeding.

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